

## A NEW STAY STITCH FOR DEEP WOUNDS

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This stitch is new to me, as I have never seen any description of it before. If such, however, has been used or devised previously, I apologize to the author. It is a great improvement on the ordinary method of closing a deep wound, especially of the abdomen.

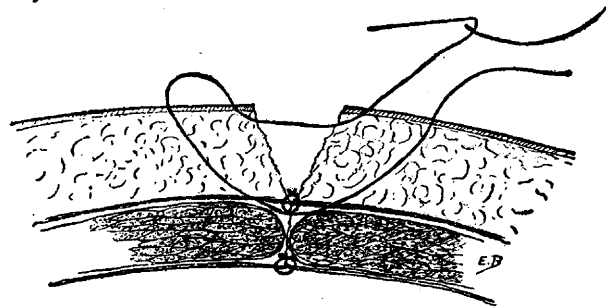


Fig. 1.—Showing silkworm gut introduced after deep fascia is closed with cat-gut.

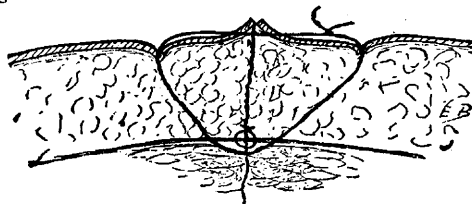


Fig. 2.—Showing skin everted, knot tied to the side of wound, and approximation of the parts.

This stitch, ordinarily speaking, is a mattress suture on the side, the deep layers being closed in their anatomic relations with catgut as usual. Silkworm-gut is used on a large curved needle which is inserted about an inch from the edges of the wound through and including the edges of the deep fascia, and out on the other side at the same distance from the wound. The needle is then passed back through the skin one-fourth inch from the edges and tied to one side of the wound (Figs. 1 and 2).

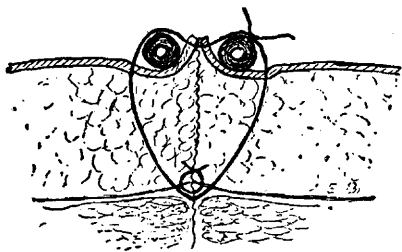


Fig. 3.—Showing rubber or glass tube on each side of wound.

The advantages are:

It gives complete support.

There is eversion of the skin edges.

Accurate approximation of the edges is obtained.

The knot to one side of the skin line facilitates the use of skin clips or other skin-closing material.

It lessens the scar, and with a rubber or glass tube on each side, may be left as long as desired without cutting the skin or causing cross scars (Fig. 3).

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## AN AUTOSEROSALVARSAN APPARATUS

MODIFIED FROM THE McCASKEY APPARATUS AND USING THE SWIFT-ELLIS TECHNIC

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I have modified the McCaskey apparatus for autoserosalvarsan treatment, which was described in *THE JOURNAL*, May 30, 1914, p. 1709, so as to make it less complicated and more easy to sterilize and to operate. There are no rubber corks to become destroyed by heat or to loosen and allow leakage. The tubing and needles can be retained in original position throughout the procedure, and sterility is thereby insured. I find it convenient to enclose each needle in a

separate small test tube before sterilizing, and to remove the test tube just before using the needle.

The apparatus consists of a graduated inverted U tube of glass, constricted at its lower extremities to receive  $\frac{1}{4}$ -inch rubber tubing, and supplied at the side of its upper rounded portion with an outlet to which is attached a short rubber tube fitted with a cotton plug.

The rubber tubes attached to the lower extremities are each supplied with a clamp, 1 inch from the U tube, and are also fitted with short pieces of glass tubing near their lower extremities. The one rubber tube is 8 inches long and terminates in an intravenous needle. The other rubber tube is 3 feet long and terminates in a connection for the intraspinal needle. Both of these terminals are enclosed in small glass test tubes. The intraspinal needle is also placed in a test tube fitted with a cotton plug.

## DIRECTIONS FOR USING THE APPARATUS

Place 20 c.c. of normal salt solution in the intraspinal arm of the inverted U tube and sterilize entire apparatus at 20 pounds steam pressure.

Give patient intravenous salvarsan in the usual way. Wait from one-half to three-quarters of an hour and then insert the intravenous needle of the apparatus into the patient's vein. Loosen the clamp on the intravenous tube and produce suction through the upper outlet, filling the intravenous arm of the inverted U tube to 50 c.c. Then clamp the rubber tube again and remove the needle from the vein.

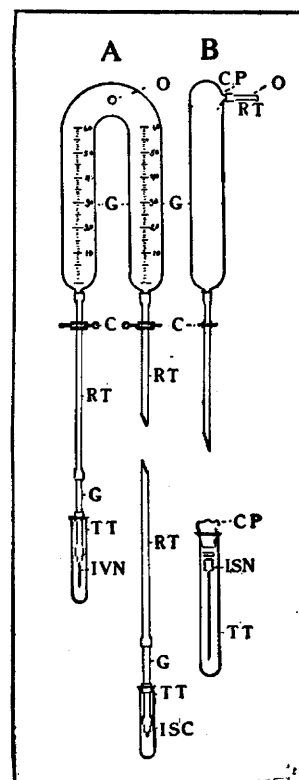
Place the apparatus in an ice box over night to allow the serum to separate. The blood clot will adhere to one side of the tube, and the clear serum can be gently and gradually poured over into the intraspinal arm by tipping the apparatus. The amount and proportion of serum and salt solution in the intraspinal side of the tube can be varied as desired from 100 per cent. serum to 50 per cent. serum or less. Mix the serum with the salt solution and place the apparatus in a water bath, heating to 56 C. (132.8 F.) for half an hour. Cool to the temperature of the body, and the salvarsanized serum is now ready for use.

Insert the intraspinal needle, withdraw the spinal fluid, and then being sure that all air is out of the intraspinal tubing, connect the needle with the apparatus and allow the serum to enter the spinal canal. Gravity is the only pressure needed as a rule, or pressure may be applied through the upper outlet of the inverted U tube.

The advantages of this apparatus are:

1. The entire apparatus is sterilized at once and remains sterile throughout the procedure.
2. The blood, serum and salt solution do not come in contact with unfiltered air at any time.
3. The apparatus has no rubber stoppers or sliding glass tube.
4. The apparatus is not complicated and is easy to operate.

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Autoserosalvarsan apparatus: A, front view; B, side view; G, glass; C, clamp; O, outlet; RT, rubber tubing; CP, cotton plug; TT, test tube; IVN, intravenous needle; ISN, intraspinal connections; ISN, intraspinal needle.